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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,626	06/10/2005	Alexander Cornelis Geerlings	NL 021285	8943

24737 7590 02/09/2011
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
AHMED, HAMDY S	
ART UNIT	PAPER NUMBER
2189	
MAIL DATE	DELIVERY MODE
02/09/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/538,626	GEERLINGS ET AL.	
	Examiner	Art Unit	
	HAMDY S. AHMED	2189	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 October 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3 and 5-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *9* is/are allowed.

6)☒ Claim(s) *1,3,5-8 and 10-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 2 and 4 are cancelled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, 7, 11-12-15, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKernan (US 2001/0046196 A1), in view of Ottesen et al ("US 6,067,203").

As to claims 1 and 17, McKernan teaches a method of operating a storage device sensitive to vibrations in an environment with a source of vibrations (e.g., see abstract 1-4, wherein a method is provided for reading information from a rotating storage medium that allows data to be read at high speeds; the rotation is the source of vibrations, and makes the storage device sensitive to those vibrations), characterized in that the method comprises the following acts: measuring the signal performance of the storage device (e.g., see paragraph 24, lines 19-21, wherein the read channel processor delivers a digital bit stream with associated clocking signals to the decoder; paragraph 25, lines 1-25, wherein the decoder performs multiple functions, including analyzing the bit stream; and paragraph 26, lines 1-6, wherein the various decoding

operations generate information indicating an error level in the decoded bit stream, which is communicated to the microcontroller that executes the media-read processor's control algorithms), and when the measured performance of the storage device decreases below a pre-determined level taking action to reduce the influence of vibrations generated by the source of vibrations (e.g., see paragraph 26, lines 9-11, wherein based on reported error level, the microcontroller may send various types of commands to the servo processor; since access error rate is inversely proportional to access rate, when the access error rate goes up, it means that the access rate goes down. Therefore, when access error rate's threshold increases beyond a threshold, the access rate must drop below a threshold), wherein the signal performance of the storage device includes at least one of access time of the storage device, data access rate, and data storage rate (see figure 3, block 320, and paragraph 27, lines 17-23, wherein a command is forwarded from the microcontroller to the servo processor to instruct the servo processor to perform a read operation at a specified spin rate 'i', which may be an index into an array of control parameters employed by the servo processor. A function f(ER,S) is computed and compared to a threshold value T). But McKernan does not disclose **wherein the action comprises an act of providing a message to a user to reduce the vibrations**. However Ottesen teaches wherein the control signal 207 may also be used to provide a signal indicative of the environmental operation conditional. Wherein such information is entered by the user of the system in which the storage device is connected, For example, a computer having a disk derive capable of altering the spindle speed in response to environmental conditional may be used to

prompt the user to input the environmental conditions. This information may be provided , via control signal 207 to control unite 205 which turn appropriately adjust the spindle speed, (see column 5, lines 47-59 and also column 10, lines 64-67 and column 11, lines 1-10.). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of McKiernan by adopting the teaching of Ottesen by sending a signal to the user/or the sensor along line 336 to initiate a power savings mode, in order While the disk drive is operating in its low power mode, the effectiveness of the servo control is reduced for the reasons described above., and to provide acceptable vibrations or shock, (see column 11, lines 5-10).

As to claim 3, McKernan discloses a method wherein the signal performance of the storage device is indicated by an average bit rate of the storage device (see figure 3, block 330, and paragraph 27, lines 9-13, wherein a speed parameter 'i' is initialized according to a function i=I(S) where I is an initialization function. The argument of this function, S, corresponds to a set of one or more state variables maintained in the system; one of these variables is the data access rate).

As to claim 7 McKernan **a method of operating a storage device sensitive to vibrations in an environment with a source of vibrations** (e.g., see abstract 1-4, wherein a method is provided for reading information from a rotating storage medium that allows data to be read at high speeds; the rotation is the source of vibrations, and makes the storage device sensitive to those vibrations), **characterized in that the method comprises the following acts** (e.g., see paragraph 24, lines 19-21, wherein

the read channel processor delivers a digital bit stream with associated clocking signals to the decoder; paragraph 25, lines 1-25, wherein the decoder performs multiple functions, including analyzing the bit stream; and paragraph 26, lines 1-6, wherein the various decoding operations generate information indicating an error level in the decoded bit stream, which is communicated to the microcontroller that executes the media-read processor's control algorithms):

measuring the signal performance of the storage device; and when the measured signal performance of the storage device decreases below a pre-determined level, taking action to reduce the influence of vibrations generated the source of vibrations (e.g., see paragraph 26, lines 9-11, wherein based on reported error level, the microcontroller may send various types of commands to the servo processor; since access error rate is inversely proportional to access rate, when the access error rate goes up, it means that the access rate goes down), **wherein the signal performance of the storage device includes at least one of access time of the storage device, data access rate** (see figure 3, block 320, and paragraph 27, lines 17-23, wherein a command is forwarded from the microcontroller to the servo processor to instruct the servo processor to perform a read operation at a specified spin rate 'i', which may be an index into an array of control parameters employed by the servo processor. A function f(ER,S) is computed and compared to a threshold value T).

But McKernan fails to disclose that wherein when the measured signal performance decreases below the pre-determined level and the environmental temperature of the environmental temperature of the storage device is above a further

pre-determined level. However, Ottesen discloses that the environmental temperature of the storage device is above a further pre-determined level (see column 6, lines 51-56, wherein the temperature exceed a particular threshold)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of McKernan by adopting the teaching of Ottesen and determining that the environmental temperature of the storage device is above a further pre-determined level in order to control the speed of the disk derive (see column 6, lines 51-56).

As to claim 11 McKiernan discloses **a method of operating a storage device sensitive to vibrations in an environment with a source of vibrations, characterized in that the method comprises the following acts**(e.g., see abstract 1-4, wherein a method is provided for reading information from a rotating storage medium that allows data to be read at high speeds; the rotation is the source of vibrations, and makes the storage device sensitive to those vibrations)**: measuring the signal performance of the storage device; and when the measured signal performance of the storage device decreases below a pre-determined level, taking action to reduce the influence of vibrations generated by the source of vibrations**(e.g., see paragraph 26, lines 9-11, wherein based on reported error level, the microcontroller may send various types of commands to the servo processor; since access error rate is inversely proportional to access rate, when the access error rate goes up, it means that the access rate goes down)**, wherein the signal performance of the storage device includes at least one of access time of the storage device, data access rate, and**

data storage rate (see figure 3, block 320, and paragraph 27, lines 17-23, wherein a command is forwarded from the microcontroller to the servo processor to instruct the servo processor to perform a read operation at a specified spin rate 'i', which may be an index into an array of control parameters employed by the servo processor. A function f(ER,S) is computed and compared to a threshold value T), and the action comprises an act of controlling the first apparatus by reducing the power of the vibrations caused by the source of vibrations (e.g., see abstract, lines 9-13, wherein read errors are detected and the speed of the medium is altered in response to the detected read errors). wherein: the source of vibrations is comprised by a first apparatus and the storage device is comprised by a second apparatus the first and the second apparatus are connected through a network link (see paragraph 4, lines 1-7 wherein network link has to exist for connection).

As to claim 12, McKernan discloses wherein a further lower predetermined level replaces the predetermined level when the measured performance of the storage device is below the predetermined level during a predetermine d period (see paragraph 27, lines 9-13, wherein a speed parameter 'i' is initialized according to a function i=I(S) where I is an initialization function. The argument of this function, S, corresponds to a set of one or more state variables maintained in the system; one of these variables is the data access rate).

As to claim 13, McKernan discloses wherein the act of measuring the signal performance of the storage device comprises an act of keeping statistics on the signal performance of the storage device (see figure 3, block 330, and paragraph 27, lines 9-

13, wherein a speed parameter 'i' is initialized according to a function i=I(S) where I is an initialization function. The argument of this function, S, corresponds to a set of one or more state variables maintained in the system; one of these variables is the data access rate) and the action is performed when the statistics drop below the predetermined level (e.g., see paragraph 26, lines 9-11, wherein based on reported error level, the microcontroller may send various types of commands to the servo processor; since access error rate is inversely proportional to access rate, when the access error rate goes up, it means that the access rate goes down. Therefore, when access error rate's threshold increases beyond a threshold, the access rate must drop below a threshold).

As to claim 14 McKernan discloses that the statistics of the storage device include at least one of average access time of the storage device, median access time of the storage device, standards deviation of the access time of the storage device, and average bit-rate of the storage device (see figure 3, block 330, and paragraph 27, lines 9-13, wherein a speed parameter 'i' is initialized according to a function i=I(S) where I is an initialization function. The argument of this function, S, corresponds to a set of one or more state variables maintained in the system; one of these variables is one of average access time of the storage device, median access time of the storage device, standards deviation of the access time of the storage device, and average bit-rate of the storage device).

As to claim 15, McKernan discloses wherein the storage device is a disk drive (see abstract, lines 14-15, wherein the inventive techniques are especially applicable to CD-ROM and DVD technology, which both employ disk drives).

As to claim 19, McKernan wherein the source of vibrations is a disk drive arranged to spin a disk in operation (see abstract, lines 1-9).

Claims 5, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKernan (US 2001/0046196 A1), in view of Ottesen et al ("US 6,067,203").

in view of Kimura (patent No: 4,831,449) and further in view of Hill et al (patent No: 5,129,106).

As to claim 5, McKernan and Ottesen disclose the method of claim 1 as mentioned above. But McKernan and Ottesen fail to disclose wherein the source of vibrations is the first loudspeaker, and the loudspeaker and the storage device comprised in the same housing.

However, Kimura discloses wherein the source of vibrations is the first loudspeaker, and the loudspeaker and the storage device comprised in the same housing.

(e.g., see figure 2, elements 4B and 4A are loudspeakers in the same housing; and column 1, lines 60-66, wherein the television apparatus contains a television receiver, a video tape recorder for recording and reproducing video and audio information included in a received television signal, speakers for audibly reproducing audio information of the television signal, and a cabinet containing the television receiver, the video tape recorder, and the speakers).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of McKernan and Ottesen by adopting the

teaching of Kimura and having the source of vibrations be the first loudspeaker, and the loudspeaker and the storage device comprised in the same housing in order to avoid distortion of recorded video information (see column 1, lines 66-67).

But McKernan, Ottesen and Kimura fail to disclose wherein the action comprises an act of switching sound reproduction from the first loudspeaker to a second loudspeaker that is remote from the storage device. However, Hill discloses wherein the action comprises an act of switching sound reproduction from the first loudspeaker to a second loudspeaker that is remote from the storage device (e.g., see column 9, lines 15-26, wherein various loudspeakers in a loudspeaker system are designed to be arranged in a specific spatial arrangement, with some remote from others, for optimal sound reproduction).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the methods of McKernan, Ottesen and Kimura by adopting the teaching of Hill and switching sound reproduction from the first loudspeaker to a second loudspeaker that is remote from the storage device in order to deliver a relatively high acoustic output (see column 9, lines 13-14).

As to claim 8, McKernan and Ottesen disclose the housing is a consumer electronics apparatus (see abstract, lines 14-15, wherein the housing would be a CD drive or DVD player); and storing the incoming stream of audio-visual data on a disk by the storage device (see abstract, lines 1-4 and 15-16, wherein information is stored on and then read from a CD or DVD, both of which are used to store and reproduce audio-

visual data) and that the stored stream of audio-visual data to be reproduced is stored on a disk (see abstract, lines 1-4 and 15-16, wherein information is stored on and then read from a CD or DVD, both of which are used to store and reproduce audio-visual data).

But McKernan and Ottesen i fail to teach the storage device is arranged to record an incoming stream of audio-visual data; the consumer electronics apparatus is arranged to reproduce the incoming stream of audio-visual data by means of a display screen and the loudspeaker; and wherein the method comprises acts of: reproducing the stored stream of audio-visual data stored on the disk by means of the display screen and loudspeaker.

However Kimura teaches the storage device is arranged to record an incoming stream of audio-visual data (see column 1, lines 60-63); the consumer electronics apparatus is arranged to reproduce the incoming stream of audio-visual data by means of a display screen and the loudspeaker (see column 3, lines 22-40); and wherein the method comprises the following acts: reproducing the stored stream of audio-visual data by means of the display screen and loudspeaker (see column 3, lines 52-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of McKernan and Ottesen by adopting the teaching of Kimura and having the storage device arranged to record an incoming stream of audio-visual data; the consumer electronics apparatus arranged to reproduce the incoming stream of audio-visual data by means of a display screen and the loudspeaker; and wherein the method comprises acts of: reproducing the stored stream

of audio-visual data by means of the display screen and loudspeaker in order to avoid distortion of recorded video information (see column 1, lines 66-67).

As to claim 10, McKernan and Ottesen discloses that the housing is a consumer electronics apparatus arranged to reproduce audio-visual data (see abstract, lines 14-15, wherein the housing would be a CD drive or DVD player). But McKernan fails to teach that the second loudspeaker is connected to the consumer electronics apparatus. However, Kimura teaches that the second loudspeaker is connected to the consumer electronics apparatus (see figure 1, elements 4A and 4B, which are the speakers).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of McKernan and Ottesen by adopting the teaching of Kimura and having the second loudspeaker connected to the consumer electronics apparatus in order to avoid distortion of recorded video information (see column 1, lines 66-67).

But McKernan, Ottesen and Kimura fail to disclose that the second loudspeaker is not contained in the consumer electronics apparatus, and the action comprises acts of: reducing reproduction of the audio-visual data through the first loudspeaker contained in the consumer electronics apparatus; and starting or increasing reproduction of the audio-visual data through the second loudspeaker.

However, Hill teaches that the second loudspeaker is not contained in the consumer electronics apparatus (e.g., see column 9, lines 15-26, wherein various loudspeakers in a loudspeaker system are designed to be arranged in a specific spatial arrangement, with some remote from others, for optimal sound reproduction); and the

action comprises acts of : reducing reproduction of the audio-visual data through the first loudspeaker contained in the consumer electronics apparatus; and starting or increasing reproduction of the audio-visual data through the second loudspeaker(see column 8, lines 30-48, wherein sound reproduction is switched from one loudspeaker to another based on what arrangement is optimal).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the methods of McKernan, Ottesen and Kimura by adopting the teaching of Hill by having the second loudspeaker not contained in the consumer electronics apparatus, and the action comprise acts of: reducing reproduction of the audio-visual data through the first loudspeaker contained in the consumer electronics apparatus; and starting or increasing reproduction of the audio-visual data through the second loudspeaker in order to deliver a relatively high acoustic output (see column 9, lines 13-14).

Claims 6, 16 and 18-20 are rejected under under 35 U.S.C. 103(a) as being unpatentable over McKernan (US 2001/0046196 A1) in view of Ottesen et al ("US 6,067,203"), and further in view of Kimura (patent No: 4,831,449).

As to claim 6, McKernan Ottesen discloses the method of claim 1 as mentioned above. But McKernan disclose wherein the source of vibrations is a loudspeaker and the action comprising an act of reducing the volume of the sound produced by the loudspeaker. However, Kimura discloses wherein the source of vibrations is a loudspeaker (e.g., see column 3, lines 58-64, wherein as the audio output of the

speaker increases, this causes the components in the cabinet to vibrate) and the action comprising an act of reducing the volume of the sound produced by the loudspeaker (see column 4, lines 46-54, wherein an audio control circuit may cause a decrease in the audio output of the speakers, which is equivalent to decreasing the volume).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of McKernan and Ottesen by adopting the teaching of Kimura and having the source of vibrations be a loudspeaker and having the action comprise an act of reducing the volume of the sound produced by the loudspeaker in order to avoid distortion of recorded video information (see column 1, lines 66-67).

As to claim 16 McKernan Ottesen discloses claim 1 as mentioned above. But McKernan does not teach wherein the action comprising an act of halting activities related to the storage device other than storage and retrieval of audio-visual data. However, Kimura discloses an act of halting activities related to the storage device other than storage and retrieval of audio-visual data (see figure 1, element 5, wherein the storage device is the video recorder (VTR), a device that performs operations exclusively).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of McKernan and Ottesen by adopting the teaching of Kimura by including an act of halting activities related to the storage device other than storage and retrieval of audio-visual data in order to avoid distortion of recorded video information (see column 1, lines 66-67).

As to claim 18, McKernan Ottesen disclose claim1 and 17 as mentioned above. And a consumer electronics apparatus comprising a storage device arranged to store the stream of audio-visual data on a disk (see abstract, lines 1-4 and 15-16, wherein information is stored on and then read from a CD or DVD, both of which are used to store and reproduce audio-visual data); a source of vibrations (see abstract, lines 4-7, wherein the imperfections in a rotating storage device can cause vibration and wobble)); and McKernan teaches the circuit as claimed in claim 17 for operating the storage device as mentioned above.

But McKernan Ottesen fails to disclose a consumer electronics apparatus comprising: means for receiving a stream of audio-visual data. However, Kimura discloses a consumer electronics apparatus comprising: means for receiving a stream of audio-visual data (see abstract, line 1, wherein the television apparatus includes a television receiver).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of McKernan and Ottesen by adopting the teaching of Kimura and having a consumer electronics apparatus comprising: means for receiving a stream of audio-visual data in order to avoid distortion of recorded video information (see column 1, lines 66-67).

As to claim 20, McKernan and Ottesen disclose the apparatus of claims 17 and 18 as mentioned above. But McKernan and Ottesen fails to disclose wherein the source of vibrations is a loudspeaker. However, Kimura discloses wherein the source of vibrations is a loudspeaker (e.g., see column 3, lines 59-64).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of McKernan and Ishii by adopting the teaching of Kimura and having the source of vibrations be a loudspeaker in order to avoid distortion of recorded video information (see column 1, lines 66-67).

Reasons for allowance

Claim 9 is allowable.

The following is an examiner's statement of reasons for allowance:

As to claim 9 the prior art of record, specifically McKernan (US 2001/0046196 A1) and Ishii et al ("US 7,108.134 B2"),taken either individually or combination fails to teach or suggest the limitation in combination of" ... wherein the source of vibrations is a first loudspeaker, and the first loudspeaker and the storage device are contained in the same housing, wherein the action comprises an act of switching sound reproduction from the first loudspeaker to a second loudspeaker that is remote from the storage device, wherein:, the housing is a consumer electronics apparatus; the storage device is arranged to record an incoming stream of audio-visual data; the consumer electronics apparatus is arranged to reproduce the incoming stream of audio-visual data by means of a display screen and the loudspeaker; and wherein the method further comprises acts of: storing the incoming stream of audio-visual data on a disk by the storage device; and reproducing the stored stream of audio-visual data stored on the disk by means of the display screen and the loudspeaker, and wherein the action to reduce the influence of vibrations generated by the source of vibrations comprises an act of

devising a user to render the incoming stream of audio-visual data instead of the stored stream of audio-visual data".

Response to Arguments

The applicant argues that the Thornton publication is an improper reference .However the Thornton's reference is withdrawn form the rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMDY S. AHMED whose telephone number is (571)270-1027. The examiner can normally be reached on M-TR 7:30-5:00pm and Every 2nd Friday 7:30-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bragdon Reginald can be reached on 571-272-4204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hamdy S Ahmed/
Examiner, Art Unit 2189

/Reginald G. Bragdon/
Supervisory Patent Examiner, Art Unit 2189